

**Notice of Allowability**

Application No.

10/633,556

Applicant(s)

SANO ET AL.

Examiner

Art Unit

Mark Kopec

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to app. filed 8/5/03 and Int. Summ. of 1/7/05.
2. ☒ The allowed claim(s) is/are 8-15.
3. ☒ The drawings filed on 05 August 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☒ Certified copies of the priority documents have been received in Application No. 09/741,024.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**Mark Kopec**  
Primary Examiner

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This application is a DIV of S.N. 09/741,024 (filed 12/21/00, now US 6,620,344).

Initially, it is noted that this application contains claims to the following patentably distinct inventions:

- I) claims 5-7, drawn to a process,
- II) claims 8-15, drawn to a filler/paste.

During a conversation with Mr. Cameron Weiffenbach on 12/13/04, an election was made without traverse to prosecute the invention of Group II, claims 8-15.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

**Update** page 1 of the specification to recite the following:

--This application is a DIV of S.N. 09/741,024 (filed 12/21/00, now US 6,620,344).--

**Cancel** non-elected claims 5-7.

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In claim 14, line 2, delete "composed essentially of" and replace with "--comprising--".

Authorization for this examiner's amendment was given in a telephone interview with Mr. Cameron Weiffenbach on 1/7/05.

The following is an examiner's statement of reasons for allowance:

Kawahara et al (5,807,508) discloses a conductor paste comprising a high-polymer composite obtained by dispersing super-fine-granulated copper oxide in a polymer without being aggregated, mixed copper powders mainly composed of a base copper powder having a mean particle size of 1 to 10  $\mu\text{m}$  added with at least one kind of an auxiliary copper powder having a mean particle size smaller than that of the base copper powder, and an organic solvent, wherein the weight ratio of the mixed copper powders to copper oxide in the high-polymer composite is 5 to 50 to 1 of copper oxide and the total amount of copper oxide and the mixed copper powders is 50 to 90% by weight of the conductor paste, and a production method a conductor film by coating the conductor paste on the surface of a substrate and after pre-burning the conductor paste under temperature raising, burning the conductor paste to form the conductor film on the substrate.

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The reference does not disclose or suggest the instantly claimed "copper particle clusters A".

Momotari et al (4,122,143) discloses conductive cured products are disclosed. In one embodiment a copper compound is reacted with a reducing substance capable of reducing said copper compound to metallic copper, in the presence of a metallic copper powder on a substrate, thereby reducing the copper compound to metallic copper and forming a conductive connected unit of said metallic copper powder, and the connected unit is then subjected to cure molding with a resinous curable component to integrate the constituent elements into the conductive cured product. In a second embodiment, the ligand portion of a copper compound of a ligand capable of reducing copper in a compound state is reacted with the copper moiety present in said copper compound in the presence of a metallic copper powder on a substrate. The copper moiety is reduced and precipitated to form a conductive connected unit of a metallic copper powder and the connected unit is then subjected to cure molding with a resinous curable component.

The reference does not disclose or suggest the instantly claimed "spherical metallic particles smaller diameter than the particles A".

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Mark Kopec  
Primary Examiner  
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MK

January 7, 2005